

**Remarks/Arguments:**

Claims 1, 3-6 and 8-12 have been amended. No new matter is introduced herein. Claims 1-12 are pending.

Claim 1 has been amended to recite: 1) defining a nonlinear objective function that includes control variables representing the stored influence factors for all of the different types of appraisal approaches and 2) executing nonlinear programming of the nonlinear objective function to simultaneously optimize the nonlinear objective function for all of the different types of appraisal approaches, by adjusting the control variables within the corresponding range of influence factor values. Claim 1 has also been amended to clarify that: signals indicative of an optimal range of appraisal values are provided from the optimized linear objective function and all of the different types of appraisal approaches are used to together to optimize the nonlinear objective function. Claim 12 has been amended similar to claim 1. No new matter is introduced herein. Basis for the amendments to claims 1 and 12 can be found, for example, at p. 11, line 10-p. 14, line 15; p. 15, line 18-p. 16, line 4; and p. 18, line 12-18 of the substitute specification (filed on October 14, 2003). In addition, claims 3-6 and 8-11 have been amended to correspond to amended claim 1. Applicant notes that the objective function described on p. 13, lines 7-p. 14, line 15 is optimized simultaneously for all of the different types of appraisal approaches, by using all of the different types of appraisal approaches together (for example, see p. 13, line 11 and p. 14, lines 6-7 of the substitute specification).

Claims 1-12 have been rejected under 35 U. S. C. § 101 as being directed to non-statutory subject matter. In particular, it is asserted that the claimed invention does not produce concrete results because "a user using applicant's invention can program the device differently which will produce different results even when they use the same data of influence factors and range of influence factor value". As described above, claim 1 has been amended to recite: 1) defining a nonlinear objective function that includes control variables representing the stored influence factors for all of the different types of appraisal approaches and 2) executing nonlinear programming of the nonlinear objective function to simultaneously optimize the nonlinear objective function for all of the different types of appraisal approaches (emphasis added). Claim 12 includes a similar recitation. Thus, two different people that a) define a same nonlinear objective function with the same control values (representing the stored influence factors) and b) execute nonlinear programming to simultaneously optimize the (defined) nonlinear objective function for all of the different appraisal approaches will produce a

same result. Thus, concrete and tangible results are provided by Applicant's claims 1 and 12. Accordingly, Applicant respectfully requests that the rejection of claims 1-12 under 35 U. S. C. § 101 be withdrawn.

Claims 1-12 have been rejected under 35 U. S. C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, it is asserted that the limitation "performing nonlinear programming with a predetermined nonlinear objective function" is not supported by the disclosure originally filed on July 1, 2003. As described above, applicant has amended claim 1 to recite defining a nonlinear objective function that includes control variables representing the stored influence factors for all of the different types of appraisal approaches and executing nonlinear programming of the nonlinear objective function to simultaneously optimize the nonlinear objective function for all of the different types of appraisal approaches. Basis for the amendment can be found, for example, at p. 6, line 23- p. 8, line 2; p. 8, lines 18-23; and p. 9, lines 34-40 of the specification originally filed on July 1, 2003. Claim 12 includes a similar recitation. Accordingly, Applicant respectfully requests that the rejection of claims 1-12 under 35 U. S. C. § 112, first paragraph, be withdrawn.

Claims 1-12 have been rejected under 35 U. S. C. § 112, second paragraph, as being vague and indefinite. In particular, with respect to claim 1, the Office Action asserts that "it is not clear whether performing of nonlinear programming is actually programming the computer, or, it is inputting of property related data in the computer which is already has nonlinear program." With respect to claim 12, the Office Action asserts that "it is not clear whether calculator performs limitations as recited, or, it is applicant's intention on how the calculator will be used." As discussed above, claim 1 has been amended to recite defining a nonlinear objective function that includes control variables representing the stored influence factors for all of the different types of appraisal approaches and executing nonlinear programming of the nonlinear objective function to simultaneously optimize the nonlinear objective function for all of the different types of appraisal approaches. Claim 12 includes a similar recitation. Applicant also notes that, as known to the skilled person, nonlinear "programming" does not necessarily refer to computer programming. Instead, nonlinear programming refers to solving a problem that can be represented by an objective function, where the solution seeks to optimize the objective function based on particular control variables and constraints. Accordingly, Applicant respectfully requests that the rejection of claims 1-12 under 35 U. S. C. § 112, second paragraph, be withdrawn.

Claims 1-12 have been rejected under 35 U. S. C. § 103(a) as being unpatentable over Robbins (US 2001/0039506) in view of "Modern Real Estate Practice" by Galaty *et al.* It is respectfully submitted, however, that these claims are now patentable over the cited art for the reasons set forth below.

Claim 1, as amended, includes features neither disclosed nor suggested by the cited art, namely:

...defining a nonlinear objective function that includes control variables representing the stored influence factors for all of the different types of appraisal approaches...

...executing nonlinear programming of the nonlinear objective function to simultaneously optimize the nonlinear objective function for all of the different types of appraisal approaches, by adjusting the control variables within the corresponding range of influence factor values...

...all of the different types of appraisal approaches are used together to optimize the nonlinear objective function.  
(Emphasis Added)

Claim 12 includes a similar recitation.

Robbins teaches the determination of a real estate parcels market value through the application of the sales comparison approach to value (paragraph [0076]). In Figs. 3 and 4, Robbins teaches that a set of procedures are created to build property attribute databases and a set of procedures are created to apply the rules of appraisal to the property attribute databases in order to estimate the value of a subject property ([0105]). In Figs. 4 and 5, Robbins teaches the development of a sales condition score for individual parcels that may be used to suggest to the user a relationship between a comparable selling price and its attribute inventory (paragraphs [0133 - 0144]). Robbins also teaches that the invention assists in the reliability of the sales comparison approach by providing access to an increased number of substitute properties (paragraph [0080]).

As acknowledged by the Examiner, Robbins "does not explicitly teach using all three sales comparison approach, an income capitalization approach and a cost approach as different types of appraisal approaches," as required by claims 1 and 12. Robbins discloses, at paragraph [0080], that "an appraiser generally considers three separate approaches to value: the cost approach, the income approach, and the sales comparison approach" but that "the invention is specific to the sales comparison approach" (emphasis added).

Furthermore, Robbins does not teach: 1) defining a nonlinear objective function that includes control variables representing the stored influence factors for all of the different types of appraisal approaches, 2) executing nonlinear programming to simultaneously optimize the nonlinear objective function for all of the different types of appraisal approaches or 3) that all of the different types of appraisal approaches are used together to optimize the nonlinear objective function, as required by claims 1 and 12. Robbins is silent on defining a nonlinear objective function and executing nonlinear programming of the nonlinear objective function, or that the nonlinear objective function is defined and optimized using all types of appraisal approaches. In contrast to using all different types of appraisal approaches, Robbins teaches that the appraiser considers the appropriateness of the approaches to value in order to select the most appropriate approach (paragraph [0081]). Thus, Robbins does not include all of the features of claims 1 and 12.

Galaty *et al.* disclose that appraisers traditionally use the sales comparison approach, the cost approach and the income approach, where the three methods serve as checks against each other (p. 304, last paragraph). At p. 305-p. 312, Galaty *et al.* disclose linear calculations for separately appraising value by each of the three methods. At p. 312, Galaty *et al.* disclose that, for reconciliation, three separate indications of value are determined (i.e., one for each of the three methods) and that a weighted average is used to generate a "single estimate of market value." Thus, Galaty *et al.* teach separate calculations for each of the different appraisal value approaches. In addition, Galaty *et al.* teach combining the determined values for the three separate approaches (i.e., after they are separately calculated) to generate a single estimate of a market value.

Galaty *et al.*, however, do not disclose or suggest: 1) defining a nonlinear objective function that includes control variables representing the stored influence factors for all of the different types of appraisal approaches, 2) executing nonlinear programming to simultaneously optimize the nonlinear objective function for all of the different types of appraisal approaches or 3) that all of the different types of appraisal approaches are used together to optimize the nonlinear objective function, as required by claims 1 and 12. Galaty *et al.* are silent on defining a nonlinear objective function and executing nonlinear programming of the nonlinear objective function, or that the nonlinear objective function is defined and optimized using all types of appraisal approaches. In contrast, Galaty *et al.* teach separate calculations for each of the three different appraisal value approaches and only combines the appraisal values after they

are separately calculated. Thus, Galaty *et al.* do not make up for the deficiencies of Robbins. Accordingly, allowance of claims 1 and 12 is respectfully requested.

Claims 2-11, which include all of the limitations of claim 1, are also patentable over the cited art for at least the same reasons as claim 1.

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,

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Date

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